



May 16, 2007

Ex Parte Presentation

Via Electronic Submission

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street S.W.
Washington, DC 20554

Re: *Amendment of the Commission's Part 90 Rules in the 904-909.75 and 919.75-928 MHz Bands, WT Docket 06-49*

Dear Ms. Dortch:

Progeny LMS, LLC ("Progeny") hereby responds to the letter dated May 11, 2007, by Henry Goldberg and Mitchell Lazarus on behalf of the Part 15 Coalition (the "Part 15 Letter").¹ While Progeny maintains that its findings from the field measurements for the spectrum utilization it made in the 902-928 MHz band are accurate, Progeny also recognizes that there are many unlicensed devices operating in this band. Progeny intends to co-exist with all unlicensed users in the 902-928 MHz band, while at the same time making the most efficient possible use of this band.

The Part 15 Letter responds to Progeny's study of spectrum usage in the 902-928 MHz band, which found through measurements that the Multilateration-Location and Monitoring Service (M-LMS) spectrum (specifically, C Block) is occupied less than one percent of the time.² Rather than conducting its own measurements in the band to shed more light on this issue, the Part 15 Coalition has put forward a number of theoretical arguments that are in some cases untrue or irrelevant, and in other cases actually support Progeny's proposal:

- The Part 15 Letter claims that Progeny sought to locate only high power, high duty cycle signals, and that Progeny failed to measure energy from Part 15 devices operating indoors. In fact, both claims are false. Progeny employed a general purpose spectrum analyzer that measured energy across

¹ Ex Parte Letter, *Amendment of the Commission's Part 90 Rules in the 904-909.75 and 919.75-928 MHz Bands, WT Docket No. 06-49*, The Part 15 Coalition, May 11, 2007.

² Ex Parte Filing, 902-928 MHz Spectrum Utilization Study, *Amendment of the Commission's Part 90 Rules in the 904-909.75 and 919.75-928 MHz Bands, WT Docket No. 06-49*, Progeny M-LMS, LLC, March 14, 2007.



the entire 902-928 MHz band; Progeny did not set out to look for any specific signals or transmitter types. Almost one million measurements were taken throughout the Washington, DC metropolitan area. Progeny's test equipment was located outdoors, but the energy it measured originated from both indoor and outdoor transmitters. Progeny stands by its finding that the 902-928 MHz band is currently used in a highly inefficient manner, and that the M-LMS C Block in particular is unused more than 99% of the time.

- With respect to the Part 15 Letter's claim that "the vast majority" of Part 15 devices are used indoors, Progeny accepts this claim. Progeny has previously submitted into the public record an engineering analysis showing that an M-LMS transmitter operating at its maximum allowed power would not cause harmful interference to a cordless telephone system³ or other similar devices. In addition, Progeny has proposed that its own terminal devices, which may operate indoors, will operate within Part 15 power limits except in emergency situations or when performing short duration multilateration location fixes. Accordingly, Progeny believes that indoor Part 15 devices will not encounter harmful interference from an M-LMS base station or terminal device.
- With respect to the Part 15 Letter's statements about M-LMS interference to Part 15 devices operating outdoors, Progeny remains confident that it will not cause harmful interference. The Part 15 Letter claims that Progeny did not measure energy from outdoor automatic meter reading ("AMR") devices. This claim is not true; Progeny observed many AMR systems in its measurements, and noted that spectrum utilization was not only very low but also outside the M-LMS licensed sub-blocks.

In considering other outdoor Part 15 devices, Progeny has specifically put forward a proposal to limit the power spectral density (PSD) from its base stations to 24 dBm/3 kHz, and to trigger a coordination process with Part 15 users who encounter PSD from an M-LMS base station above a certain threshold.⁴ Applying the Part 15 Letter's suggested signal attenuation level of 40 dB/decade (instead of the 20 dB/decade used in the calculation of free space path loss), an M-LMS transmitter will have a lower PSD than a Part 15 transmitter after only one meter of signal propagation; and the M-LMS PSD drops to -51 dBm/3 kHz at a distance of 10 meters (three million times weaker than the PSD allowed for Part 15 devices).

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1317 F Street, N.W.
4th Floor
Washington, D.C. 20004
(202) 371-2220
Fax (202) 371-1497

³ Ex Parte Presentation, Analysis of LMS Interference To and From Cordless Telephones, *Amendment of the Commission's Part 90 Rules in the 904-909.75 and 919.75-928 MHz Bands*, WT Docket No. 06-49, Progeny M-LMS, LLC, February 28, 2007.

⁴ Ex Parte Filing, Progeny Proposal, *Amendment of the Commission's Part 90 Rules in the 904-909.75 and 919.75-928 MHz Bands*, WT Docket No. 06-49, Progeny M-LMS, LLC, April 3, 2007.



Finally, it is worth noting that the statements made in the Part 15 Letter regarding the low power, low duty cycle, and poor propagation environment of Part 15 devices confirm that field testing of M-LMS systems as required in 47 CFR 90.353(d) is completely impractical.

Progeny believes it has fully demonstrated that its proposed rules will allow co-existence of multiple services and efficient use of the 902-928 MHz band. Progeny respectfully urges the Commission quickly to make a decision in this docket.

In accordance with Section 1.1206(b) of the Commission's Rules, this letter is being filed with your office. Should you have any questions or concerns in connection with this submission, please contact me at (202) 371-2800.

Respectfully submitted,

Janice Obuchowski

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1317 F Street, N.W.
4th Floor
Washington, D.C. 20004
(202) 371-2220
Fax (202) 371-1497